CLAIMS

What is claimed is:

1   1. A method, comprising:

2   determining, in response to being accessed by a first requester, whether a

3 component is available; and

4   replacing, if the component is available, a first indicator indicating that the shared

5 resource is available, with a second indicator reducing access to the component, to permit

6 access to the component by the first requester.

1   2. The method of claim 1, further comprising:

2   indicating, if the component is unavailable, the second indicator to the first

3 requester to prohibit access to the component by the first requester.

1   3. The method of claim 2, wherein being accessed by the first requester

2 comprises the first requester executing a read.

1   4. The method of claim 3, further comprising indicating the first indicator to

2 the first requester to indicate that the first requester can access the component.

1   5. The method of claim 2, wherein being accessed comprises the first

2 requester executing a write of the second indicator.

1   6.   The method of claim 5, wherein the second indicator comprises an

2 identifier of the first requester.

1   7.   The method of claim 2, wherein determining, in response to being

2 accessed by the first requester, whether the component is available comprises

3 determining a presence of the first indicator.

1   8.   The method of claim 2, wherein determining, in response to being

2 accessed by the first requester, whether the component is available comprises

3 determining based on an external indicator that the component is available.

1   9.   The method of claim 8, wherein the external indicator comprises a flag.

1   10.   The method of claim 2, further comprising receiving, by execution of an

2 operation by a second requester upon completion of access to the component by the

3 second requester, a third indicator increasing access to the component to replace the

4 second indicator.

1   11.   The method of claim 10, wherein the operation comprises a write of the

2 third indicator.

1   12.   The method of claim 11, wherein the first requester and the second

2 requester comprise processes.

1   13.   The method of claim 11, wherein the first requester and the second

2   requester comprise one requester.

1   14.   The method of claim 11, wherein the first indicator and the third indicator

2   comprise a same indicator.

1   15.   A method, comprising:

2   determining, in response to being accessed by a first requester, whether a

3   component is available;

4   prohibiting accesses by one or more additional requesters;

5   replacing, because the component is available, a first indicator indicating that the

6   component is available, with a second indicator reducing access to the component; and

7   allowing the first requester to indicate that the component is available.

1   16.   The method of claim 15, wherein being accessed comprises the first

2   requester executing a read.

1   17.   The method of claim 16, wherein the first requester and the one or more

2   additional requesters comprise registers.

1   18.   The method of claim 17, wherein the registers comprise set-by-read

2   registers read by processes attempting to access the component.

1   19.   The method of claim 17, wherein the registers comprise set-by-write

2 registers written to by processes attempting to access the component.

1   20.   The method of claim 17, wherein the accesses by the one or more

2 requesters comprise reads.

1   21.   The method of claim 17, wherein the accesses by the one or more

2 requesters comprise writes of indicators of processes attempting to access the component.

1   22.   The method of claim 17, wherein determining, in response to being

2 accessed by the first requester, whether the component is available comprises

3 determining a presence of the first indicator indicating that a component is available.

1   23.   The method of claim 17, wherein determining, in response to being

2 accessed by the first requester, whether the component is available comprises

3 determining based on an external indicator that the component is available.

1   24.   The method of claim 23, wherein the external indicator comprises a flag.

1   25.   The method of claim 17, further comprising:

2   receiving from a second requester a third indicator increasing access to the

3 component;

4   determining, because of receiving the third indicator, that access to the component

5 has been increased; and

6   replacing the second indicator with the third indicator increasing access to the

7 component.

1   26.   The method of claim 25, wherein the first requester and the second

2 requester comprise one requester.

1   27.   A method of obtaining access to a shared resource, comprising:

2   accessing a register; and

3   changing, as a result of accessing the register if the register detects a first value;

4 indicating that the shared resource is available, the first value to a second value; and

5   limiting access to the shared resource.

1   28.   The method of claim 27, wherein accessing the register comprises reading

2 the register.

1   29.   The method of claim 27, wherein accessing the register comprises writing

2 the second value to the register.

1   30.   The method of claim 29, wherein the second value comprises an identifier

2 of a process.

1   31.   The method of claim 30, further comprising reading the register to

2   determine that the register contains the identifier.

1   32.   The method of claim 27, wherein the shared resource comprises a

2   peripheral device in a computer system.

1   33.   The method of claim 27, further comprising:

2   receiving from the register the first value indicating that the shared resource is

3   available;

4   accessing the shared resource; and

5   changing upon completion of access to the shared resource, the second value to a

6   third value increasing access to the shared resource.

1   34.   The method of claim 33, wherein changing the second value to the third

2   value comprises writing the third value to the register.

1   35.   The method of claim 34, wherein the first value, the second value and the

2   third value comprise variables.

1   36.   The method of claim 35, wherein the first value and the third value

2   comprise a same variable.

1   37.   A method, comprising:

2   executing by a process an operation;

3   determining by a register, in response to the operation, whether a first indicator

4   allowing access to a shared resource is present in the register;

5   changing by the register if the first indicator is present, the first indicator to a

6   second indicator reducing access the shared resource;

7   sending by the register the first indicator to the process;

8   determining by the process receipt of the first indicator;

9   using by the process the shared resource; and

10   replacing by the process the second indicator with a third indicator increasing

11   access to the shared resource.

1   38.   The method of claim 37, wherein the operation comprises a read of the

2   register.

1   39.   The method of claim 38, wherein the register comprises a set-by-read

2   register.

1   40.   The method of claim 37, wherein the operation comprises a write of the

2   second indicator to the register.

1   41.   The method of claim 40, wherein the register comprises a set-by-write

2   register.

1   42.   The method of claim 41, wherein the second indicator comprises an

2   identifier of the user.

1   43.   The method of claim 42, further comprising reading the register to

2   determine that the register contains the identifier.

1   44.   The method of claim 43, wherein replacing the second indicator with the

2   third indicator comprises writing the third indicator to the register.

1   45.   The method of claim 44, wherein the first indicator and the third indicator

2   comprise the same indicator.

1   46.   An article of manufacture comprising a machine-accessible medium

2   including thereon sequences of instructions that, when executed, cause a machine to:

3   determine, in response to being accessed by a first requester, whether a

4   component is available; and

5   replace, if the component is available, a first indicator indicating that the shared

6   resource is available, with a second indicator reducing access to the component, to permit

7   access to the component by the first requester.

1   47.   The article of claim 46, further comprising sequences of instructions that,

2   when executed, cause a machine to indicate, if the component is unavailable, the second

3   indicator to the first requester to prohibit access to the component by the first requester.

1   48.   The article of claim 47, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, whether

3   the component is available comprise sequences of instructions that, when executed, cause

4   the machine to determine, in response to the first requester executing a read, whether the

5   component is available.

1   49.   The article of claim 48, further comprising sequences of instructions that,

2   when executed, cause the machine to indicate the first indicator to the first requester to

3   indicate that the first requester can access the component.

1   50.   The article of claim 47, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, whether

3   the component is available comprise sequences of instructions that, when executed, cause

4   the machine to determine, in response to the first requester executing a write of the

5   second indicator, whether the component is available.

1   51.   The article of claim 50, wherein the sequences of instructions that cause

2   the machine to determine, in response to the first requester executing a write of the

3   second indicator, whether the component is available comprise sequences of instructions

4   that, when executed, cause the machine to determine, in response to the first requester

5   executing the write of an identifier of the first requester, the presence of the indicator.

1   52.   The article of claim 47, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, whether

3   the component is available comprise sequences of instructions that, when executed, cause

4   the machine to determine, in response to being accessed by the first requester, a presence

5   of the first indicator.

1   53.   The article of claim 47, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, whether

3   the component is available comprise sequences of instructions that, when executed, cause

4   the machine to determine, in response to being accessed by the first requester, that the

5   component is available based on an external indicator.

1   54.   The article of claim 53, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, based on

3   an external indicator that the component is available comprise sequences of instructions

4   that, when executed, cause the machine to determine, in response to being accessed by

5   the first requester, that the component is available based on a flag.

1   55.   The article of claim 47, further comprising sequences of instructions that,

2   when executed, cause the machine to receive, by execution of an operation by a second

3   requester upon completion of access to the component by the second requester, a third

4   indicator increasing access to the component to replace the second indicator.

1   56.   The article of claim 55, wherein the sequences of instructions that cause

2   the machine to receive, by execution of the operation by the second requester upon

3   completion of access to the component by the second requester, the third indicator

4   increasing access to the component to replace the second indicator comprise sequences of

5   instructions that, when executed, cause the machine to receive, by execution of a write of

6   the third indicator by the second requester upon completion of access to the component

7   by the second requester, the third indicator increasing access to the component to replace

8   the second indicator.

1   57.   The article of claim 56, wherein the first requester and the second

2   requester comprise processes.

1   58.   The article of claim 56, wherein the first requester and the second

2   requester comprise one requester.

1   59.   The article of claim 56, wherein the first indicator and the third indicator

2   comprise a same indicator.

1   60.   An article of manufacture comprising a machine-accessible medium

2   including thereon sequences of instructions that, when executed, cause a machine to:

3   determine, in response to being accessed by a first requester, whether a

4   component is available;

5   prohibit accesses by one or more additional requesters;

6   replace, because the component is available, a first indicator indicating that the

7   component is available, with a second indicator reducing access to the component;

8   and allow the first requester to indicate that the component is available.

1   61.   The article of claim 60, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, whether

3   the component is available comprise sequences of instructions that, when executed, cause

4   the machine to determine, in response to the first requester executing a read, whether the

5   component is available.

1   62.   The article of claim 61, wherein the first requester and the one or more

2   additional requesters comprise registers.

1   63.   The article of claim 62, wherein the registers comprise set-by-read

2   registers read by processes attempting to access the component.

1   64.   The article of claim 62, wherein the registers comprises a set-by-write

2   registers written to by processes attempting to access the component.

1   65.   The article of claim 62, wherein the sequences of instructions that cause

2   the machine to prohibit accesses by one or more additional requesters comprise

3   sequences of instructions that, when executed, cause the machine to prohibit reads by one

4   or more additional requesters.

1   66.   The article of claim 62, wherein the sequences of instructions that cause

2   the machine to prohibit accesses by one or more additional requesters comprise

3   sequences of instructions that, when executed, cause the machine to prohibit writes of

4   identifiers of processes attempting to access the component by one or more additional

5   requesters.

1   67.   The article of claim 62, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, whether

3   the component is available comprise sequences of instructions that, when executed, cause

4   the machine to determine, in response to being accessed by the first requester, a presence

5   of the first indicator.

1   68.   The article of claim 62, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, whether

3   the component is available comprise sequences of instructions that, when executed, cause

4   the machine to determine, in response to being accessed by the first requester, that the

5   component is available based on an external indicator.

1   69.   The article of claim 68, wherein the sequences of instructions that cause

2   the machine to determine, in response to being accessed by the first requester, based on

3   an external indicator that the component is available comprise sequences of instructions

4   that, when executed, cause the machine to determine, in response to being accessed by

5   the first requester, that the component is available based on a flag.

1   70.   The article of claim 62, further comprising sequences of instructions that,

2   when executed, cause a machine to:

3   receive from a second requester a third indicator increasing access to the

4   component;

5   determine, because of receiving third indicator, that access to the component has

6   been increased; and

7   replace the second indicator with the third indicator increasing access to the

8   component.

1   71.   The article of claim 70, wherein the first requester and the second

2   requester comprise one requester.

1   72.   An apparatus comprising:

2   a resource;

3   a storage area in the resource;

4   a first value in the storage area, which the storage area changes to a second value

5   in response to access to the storage area; and

6   the second value in the storage area.

1   73.   The apparatus of claim 72, wherein the resource comprises a peripheral

2   device in a computer system.

1   74.   The apparatus of claim 72, wherein the storage area comprises a register.

1   75.   The apparatus of claim 72, wherein the access to the storage area

2   comprises a read of the storage area.

1   76.   The apparatus of claim 72, wherein the access to the storage area

2   comprises a write to the storage area.

1   77.   The apparatus of claim 72, wherein the first value indicates that the

2   resource is available.

1   78.   The apparatus of claim 72, wherein the second value reduces access to the

2   resource.

1   79.   The apparatus of claim 72, wherein the storage area is linked to other

2   storage areas containing the first value.

1   80.   The apparatus of claim 79, wherein the other storage areas change the first

2   value to the second value when the storage area changes the first value to the second

3   value.